

A power supply in which a feed voltage (U_s) is guided through at least one longitudinal branch to at least one output, the at least one branch having a disconnect fuse formed as a controlled semiconductor switch (SW1) and a monitoring unit (UWE) being set up to supply a disconnect signal (s1) to the semiconductor switch when there are changes in voltage or current beyond pre-definable tolerances, in which at least one auxiliary semiconductor switch (H1A), likewise triggered by the monitoring unit (UWE), is connected in parallel to the semiconductor switch (SW1) and in the event of an overload absorbs a substantial portion of the overload current in the branch.